

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A plant cultivation system comprising a water insoluble polymer contained within a porous bag or enclosure, characterised by the water insoluble polymer being a poly(ethylene oxide) hydrogel.
2. (Original) A plant cultivation system as in Claim 1, which is placed close to the roots of plants growing in the ground.
3. (Original) A plant cultivation system as in Claim 1, which is placed close to the roots of plants growing in pots or containers.
4. (Currently Amended) A plant cultivation system as in ~~any of the previous Claims~~ Claim 1, wherein the poly(ethylene oxide) hydrogel is rendered insoluble in water by physical or chemical cross-linking.
5. (Currently Amended) A plant cultivation system as in ~~any of the previous Claims~~ Claim 1, wherein the hydrogel particles are between 100 microns to 1cm in diameter.

6. (Currently Amended) A plant cultivation system as in ~~any of the previous~~
~~Claims~~Claim 1, wherein the poly(ethylene oxide) hydrogel contains additives.

7. (Currently Amended) A plant cultivation system as in ~~any of the previous~~
~~Claims~~Claim 1, wherein the poly(ethylene oxide) hydrogel is coloured.

8. (Currently Amended) A plant cultivation system as in ~~any of the previous~~
~~Claims~~Claim 1, wherein the poly(ethylene oxide) hydrogel swells rapidly on contact with water.

9. (Currently Amended) A plant cultivation system as in ~~any of the previous~~
~~Claims~~Claim 1, wherein one kilogram of dry poly(ethylene oxide) hydrogel will store 3 to 20
litres of water.

10. (Currently Amended) A plant cultivation system as in ~~any of the previous~~
~~Claims~~Claim 1, wherein the porous bag is rapidly permeable to water.

11. (Currently Amended) A plant cultivation system as in ~~any of the previous~~
~~Claims~~Claim 1, wherein the porous bag is produced in different sizes, such that it is suitable for a
range of plants and containers.

12. (Currently Amended) A plant cultivation system as in ~~any of the previous Claims~~Claim 1, wherein the porous bag is produced in a range of different shapes, so that it is suitable for a range of plants and containers.

13. (Currently Amended) A plant cultivation system as in ~~any of the previous Claims~~Claim 1, wherein the amount of poly(ethylene oxide) hydrogel in a porous bag is altered depending on the water requirements of the plant for which it is to be used with.

14. (Currently Amended) A plant cultivation system as in ~~any of the previous Claims~~Claim 1, wherein the size of the pores in the exterior material of the porous bag are as large as possible without allowing the significant escape of contained particulate hydrogel.

15. (Currently Amended) A plant cultivation system as in ~~any of the previous Claims~~Claim 1, wherein the porous bag is sealed by heat sealing.

16. (Currently Amended) A plant cultivation system as in ~~Claims 1 to 15~~Claim 1, wherein the bag is sealed by stitching.

17. (Currently Amended) A plant cultivation system as in ~~Claims 1 to 15~~Claim 1, wherein the bag is sealed by glue.

18. (Currently Amended) A plant cultivation system as in ~~any of the previous Claims~~Claim 1, wherein the porous bag is produced from a material with an air water surface contact angle below 90°.

19. (Currently Amended) A plant cultivation system as in ~~Claims 1 to 17~~Claim 1, wherein for plants with low water requirements, the porous bag is produced from a material with an air water surface contact angle of greater than 90°.

20. (Currently Amended) A plant cultivation system as in ~~any of the previous Claims~~Claim 1, wherein the porous bag is produced from cellulose or a cellulose derivative.

21. (Currently Amended) A plant cultivation system as in ~~any of the previous Claims~~Claim 1, wherein the porous bag is knitted, braided, woven or in the form of felt.

22. (Currently Amended) A method of using a plant cultivation system, as described in ~~any of the previous Claims~~Claim 1, wherein the plant cultivation system is placed within a vessel containing a plant growth medium and a plant.

23. (Original) A method of using a plant cultivation system as in Claim 22, wherein the vessel does not contain any apertures on the lower surface.

24. (Original) A method of using a plant cultivation system as in Claim 22, wherein the vessel contains apertures to allow excess water to drain away or enter.

25. (Currently Amended) A method of using the plant cultivation system described in ~~Claims 1 to 22~~Claim 1, wherein the plant cultivation system is placed underneath a vessel containing a plant growth medium and a plant, and wherein the vessel contains one or more apertures in the lower surface which is in contact with the plant cultivation system.

26. (Currently Amended) A method of using the plant cultivation system described in ~~any of Claims 1 to 22~~Claim 1, wherein the plant cultivation system is placed on or under capillary matting in a container and a plant containing vessel is also placed on the capillary matting, wherein the plant containing vessel is provided with one or more apertures in its place.